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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,392

08/05/2003

Chi Wook An

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12/15/2004

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EXAMINER

HAN, JASON

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/634,392	AN, CHI WOOK	
	Examiner	Art Unit	
	Jason M Han	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: [Figures 1-2: (13)]. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: [Figures 3, 4, 6: (25)]. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures

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appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

a. Page 1, Line 16: grammatical error – please delete "more";

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4, 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (Japanese Publication 63-200102) in view of Stob (U.S. Patent 4991070).

6. With regards to Claim 1, Ito discloses a backlight illumination device for an LCD including:

- a lamp [Abstract Figure: (11)] disposed under a display panel [Abstract Figure: (8)]; and

- a cylindrical filter element rotatably disposed around the lamp for producing a desired optical [e.g. color] effect on the display panel.

Ito does not teach a reflection plate rotatably disposed around the lamp collimating the emitted light for a desired effect on the display panel.

Stob teaches a sleeve for a light element whereby a “protective, reflective, light diffusing sleeve is adapted to mount on a light element to protect the element and intercept light emitted thereon. The sleeve comprises a tube adapted to telescopically receive the element and a reflecting member carried by the tube for reflecting light emitted from the element. The tube is adapted to mount on the element for free rotation relative thereto to move the reflecting member about the element to control the direction of reflective light [Abstract].”

It would have been obvious to modify the backlight of Ito to incorporate the rotatable sleeve of Stob to provide greater optical control of the illumination, and thus improving the quality of light. In addition, incorporating the sleeve provides further protection for the light source, as well as enhance optically via “quality and color of reflected light can be varied by employing substrates of different color and light reflecting characters [Stob: Column 4, Lines 51-53].” Such a configuration is an obvious improvement whereby two birds are killed with a single stone. In this case, Stob's invention includes additional reflection and diffusing means to the rotational color filter of Ito.

7. With regards to Claim 2, Ito in view of Stob teaches the disclosed invention as cited above except wherein the lamp and the reflecting member are formed integrally

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with each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the lamp and the reflection member integrally, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). In this case, it is obvious that the above limitation boils down to a matter of optically affecting the illumination in a predetermined way, whereby the structural limitation is considered a design choice and the references functionally equivalent.

8. With regard to Claims 4 & 7, Ito in view of Stob discloses the claimed invention as cited above. In addition, Ito teaches a roller [Page 2, Drawing 2: (16)] which causes the cylindrical element [Drawing 2: (15)] to rotate clockwise to produce a distinct hue and in a counter-clockwise movement in producing a different color.

9. With regards to Claim 5, Ito in view of Stob teaches the disclosed invention as cited above. In addition, Ito teaches, "In one embodiment of the invention, the sleeve further comprises a second tube having a greater cross sectional area than that of and telescopically receiving the first-mentioned tube for rotation relative thereto. The second tube has means thereon for providing alternative light diffusing properties. In this manner the tubes can be independently rotated relative to the element to adjust the direction of light emitted therefrom and the quality of light reflected from the reflecting means [Column 2, Lines 50-55; underline added for emphasis]."

10. With regards to Claim 8, Ito in view of Stob discloses the claimed invention as cited above except wherein the lamp is turned on when the backlight unit structure

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operates and is turned off when the backlight unit structure stops. It is obvious and apparent that the lamp will be turned on when the backlight operates, and subsequently turned off when the backlight unit structure stops. Such a configuration would be readily recognizable to those having ordinary skill in the art.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (Japanese Publication 63-200102) in view of Stob (U.S. Patent 4991070) as applied to Claim 2 above, and further in view of Tsumura (U.S. Patent 6583579).

Ito in view of Stob discloses the claimed invention as cited above, but neither specifically teaches the reflecting member rotating at a speed synchronized according to a gate signal.

Tsumura teaches a backlight device wherein a "control unit 16 sends an instruction to a backlight driver 14, and intermittently drives the backlight element 13 at appropriate timings, or temporarily stops the driving of the backlighting element 13 in synchronism with operation timings of a radio processing unit 17 [Abstract]."

It would have been obvious to modify the backlight of Ito with the rotatable sleeve of Stob to further incorporate the timing control unit of Tsumura to again provide greater control of the illumination, and thus ensuring "a good viewing through the display [see Abstract of Tsumura]." Such a timing principle is commonly known in the art with color sequencing via a color wheel. In this case, one could time the illumination, as taught by Tsumura, to pass through an appropriate color section of the rotatable sleeve of Ito in view of Stob to produce a desired optical effect onto the display.

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12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (Japanese Publication 63-200102) in view of Stob (U.S. Patent 4991070) as applied to Claim 5 above, and further in view of Tsumura (U.S. Patent 6583579).

Ito in view of Stob discloses the claimed invention as cited above, but neither specifically teaches the reflecting member rotating at a speed synchronized according to a gate signal.

Tsumura teaches a backlight device wherein a "control unit 16 sends an instruction to a backlight driver 14, and intermittently drives the backlight element 13 at appropriate timings, or temporarily stops the driving of the backlighting element 13 in synchronism with operation timings of a radio processing unit 17 [Abstract]."

It would have been obvious to modify the backlight of Ito with the rotatable sleeve of Stob to further incorporate the timing control unit of Tsumura to again provide greater control of the illumination, and thus ensuring "a good viewing through the display [see Abstract of Tsumura]." Such a timing principle is commonly known in the art with color sequencing via a color wheel. In this case, one could time the illumination, as taught by Tsumura, to pass through an appropriate color section of the rotatable sleeve of Ito in view of Stob to produce a desired optical effect onto the display.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references have been cited to further show the state of the art pertinent to the current application, but may not be exhaustive:

US Patent 2346988 to Noel;	US Patent 3538322 to Arsem;
US Patent 4074124 to Maute et al;	US Patent 4229783 to Eberhardt;
US Patent 4287531 to Mitamura et al;	US Patent 4714983 to Lang;
US Patent 4739454 to Federgreen;	US Patent 4855818 to Morimoto et al;
US Patent 4899175 to Harada et al;	US Patent 4907862 to Suntola;
US Patent 4920410 to Tomii et al;	US Patent 5038259 to Katoh et al;
US Patent 5040101 to Aspenwall;	US Patent 5477423 to Teakell;
US Patent 5889366 to Yokokawa et al;	US Patent 6002452 to Morgan;
US Patent 6031330 to Yoshida et al;	US Patent 6186649 to Zou et al;
US Patent 6232963 to Tew et al;	US Patent 6292594 to Iwai;
US Patent 6369523 to Matsuura et al;	US Publication 2002/0057238 to Nitta et al;
US Patent 6535187 to Wood;	US Patent 6573882 to Takabayashi;
US Patent 6614185 to Nishimura et al;	US Patent 6693619 to Miura et al;
US Patent 6791527 to Yoshinaga et al;	
Japanese Publication JP04147127 to Imai, Masaaki ;	
Japanese Publication JP2000111909 to Shiotani, Yasushi et al.	


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (12/02/2004)



JOHN ANTHONY WARD
PRIMARY EXAMINER